



HELP

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for all PC problems

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for help with software applications

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HELPPFILE

Does my phone need anti-virus software?

Q Last week I got a Nokia E61 phone, which came with a trial of F-Secure Anti-Virus. Can you tell me if it is worth buying this product or are there better ones, or even free mobile security applications available for my phone?

Anton van Gastel, avangastel@btinternet.com

A It is certainly possible in theory for smartphones, such as your Nokia E61, to be infected by viruses. They are essentially little computers, running the Symbian operating system with internet and Bluetooth connections that might allow a virus to enter the system.

Companies such as F-Secure, a pioneer in anti-virus software for these phones, have been warning about the danger of mobile phone viruses for years. However, other experts point out that F-Secure is in the business of selling anti-virus software and suggest that the company may be exaggerating the danger.

We certainly haven't seen any widespread outbreaks of dangerous viruses for Symbian yet. There have been hoaxes or urban myths claiming that a virus could enter your computer through Bluetooth without you knowing about it; these are false. There have been a few experimental viruses that were never found in the wild. There are also around 300 or so Trojans that do exist. Although most are pretty rare, some do pose a real threat.

Trojans, named after the Trojan Horse that the Greeks used to capture the city of Troy, are malicious programs

that disguise themselves as something harmless. If you see cracked versions of popular applications offered for free, or free ring tones from unknown sites, it is possible that they may contain a Trojan. So take care to download only from trusted sites.

Bear in mind that your phone is much harder to infect than a Windows-based computer. For a start, the operating system is in read-only memory (ROM) making it hard but not impossible for operating system files to be modified. Second, Symbian was designed with security in mind. It will always ask for user confirmation before installing any new software application, and again before allowing new applications to access data or the network, so it would be hard for a virus to install itself without your knowledge.

Though security flaws are inevitable in any operating system, F-Secure's own security expert Patrik Runald admits that all the malware the company has seen so far relies on the user installing it and bypassing three or four security warnings. In practice, this means it is risky only when you're downloading and installing software on your phone. Caution in what you download, and from where, should be sufficient.

Computer Shopper has not yet tested anti-virus software for Symbian phones. F-Secure has been in this business longer than anyone else, so its mobile product is a sensible choice. Symantec only recently introduced a Norton anti-virus program for Symbian OS, while AVG currently offers a beta trial version.



▲ Avoid iffy software and your phone should be safe

Erasing personal data

Q I am about to donate my PC and buy a new laptop for home use. The PC runs Windows XP Home Edition. How can I be sure that I have erased everything on the hard disk when I give the PC away? Should I completely uninstall Windows, and will this do the trick?

I have SecureClean installed, but how can I be certain that all my own private data is fully erased and can't be restored by someone else? I don't want to scrap the PC, as it is only two years old and I can donate it locally to a good cause.

Simon Ekins, selincs@vikingway.co.uk

A When a file is deleted, it is really only the index entry for the information that is removed. The data itself remains on the disk until the space it occupies is needed for something else. Until then it can potentially be read. This remains the case even if you remove the entire Windows installation and reformat the disk. The only way to prevent someone finding personal information on your

hard disk easily (short of taking a big hammer to it) is to use a disk-wiping utility.

SecureClean should erase your personal data but unfortunately it costs US \$40 (about £20), which we think is far too much. There are plenty of free utilities that do the job just as well.

To be completely secure you should run a utility that wipes the entire surface of the hard disk. Then you would have to reinstall the operating system, updates, drivers and so on. This can all be a pain (unless the computer came with a manufacturer's restore utility).

It would be much simpler to delete your personal files, run Disk CleanUp (found under All Programs, Accessories, System Tools) to remove temporary files and then run a utility that wipes the unused portions of the hard disk. There are lots of these, but one that is easy to use is called FileMonkey (which has a free 30-day trial version; see <http://tinyurl.com/4mfma>). Alternatively, for a completely free program, try Eraser on our cover DVD or from www.heidi.ie/eraser.

Using Windows Vista OEM twice

Q I have a notebook PC that I upgraded from Windows XP to Vista Home Premium. I got the installation disc (OEM system builder version) from a local PC store. I am also thinking about building a new PC for someone.

I know that once you install an OEM version of Windows Vista on a computer, it is tied to that PC. I am thinking of installing the OEM version of Vista on the machine I am building, too, to save me money. When automatic activation fails, I could ring a Microsoft representative and make up the excuse of the motherboard failing, so they will have to give me an activation code. I can then store the

number they give me for future reference so that I won't have to call them again. Please tell me whether or not this will work.

Squidward Tentacles, squidward.tentacles@googlemail.com

A You could try asking piracy@microsoft.com. What you suggest is against Microsoft's licensing terms and conditions, not to mention the law. Regardless of those rather important facts, your plan will not work anyway, because Windows Vista's activation process is stronger than the one for Windows XP.

Replacing the circuit board on a failed hard disk

Q I have a lot of home video on my Western Digital 250GB hard disk. I was in the middle of backing it up when my system locked. The disk I was backing up to contained copies of only around 5GB of the original files. When I looked at the disk I was backing up from, I could see a small brown mark on the PCB. So I took the circuit board off and turned it over, only to find that one of the chips on the board had burnt out.

If I had another Western Digital drive of the same capacity or smaller, would it be possible to swap the PCB from the good drive to the bad one in order to save the information stored on it?

Kev Myatt, kevmyatt@tiscali.co.uk

A In cases such as this, where there is clear damage to the drive's printed circuit board and no sign (such as strange noises) of internal damage, there is a good chance that you can rescue the data by swapping the circuit board with that of another, similar drive.

It's also possible that the burnt-out chip is the result of an internal short circuit in your hard disk, in which case changing the circuit board will only result in another burnt-out board. So never try this by borrowing a board from a drive that contains valuable data.

First, you need to find a drive with the same circuit board. The circuit board number is usually printed near one edge of the board. On a Western Digital drive it will be something like 2060-701292-000 Rev A. Very occasionally, a different board number will work, provided that it looks identical.

Finding the right board is the problem. Unless the drive is just a few months old, the chances are that the new drives in local stores are completely different models. You will probably need to find a used drive of about the same age. That said, few sellers will tell you the circuit board number on their drives, although sometimes the pictures on auction sites such as eBay are clear enough to allow you to match the codes on the drive label. Unless you can visit a local seller of used drives, finding a replacement can be tricky. The need to carry large stocks of different drives is a major reason why professional data recovery services are so expensive.

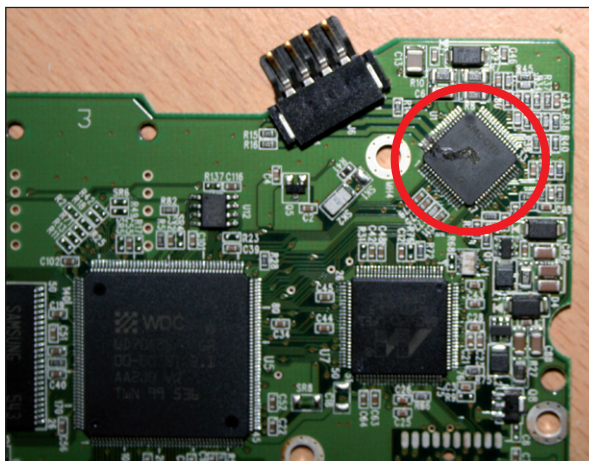
While buying the same model of drive gives you the best chance of matching the circuit board, you may find a matching board on another capacity of drive within the same series. For example, some 80GB, 160GB and 250GB drives may all belong to the same family and use the same board.

Be careful, though. The short drive designation, such as 'WD2500', does not uniquely identify a model. There have been several different WD 250GB drives with this general label. Look for a more detailed model number, in this case WD2500BB-55GUCO, and match it as closely as possible. Finally, look at the firmware revision code. The closer it is to your drive, the more likely it is to work.

To replace the circuit board you will need a star-shaped Torx screwdriver. You'll usually need a T9 size for desktop drives and a hard-to-find T5 one for notebook drives. Take care to avoid discharging static electricity into it. Once the screws are removed, the board simply lifts off. Once you have installed it in the old drive, tighten the screws evenly. If it does not work first time, try removing and then replacing the board, as it's possible that one of the contacts may not have been properly in position.

If the drive works, we would consider this only a temporary solution. Copy the data off immediately and return the circuit board to the drive it came from.

Finally, once you have recovered your data, work out a regular backup plan.



▲ When a chip burns out as shown, you may be able to rescue data on the disk by replacing the circuit board

Your experts

HELPFILE

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Paul Mullen

With 27 years of PC experience as a power user, programmer and IT consultant, Paul Mullen answers all PC problems, tackling hardware, system and security issues.



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SOFTWARE HELP 170

Kay Ewbank

Database developer and productivity expert Kay Ewbank offers help with office applications.



Ben Pitt

Professional musician and keen photographer Ben Pitt gives advice on using creative software.



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BUYING HELP

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Chris Finnamore

Labs Manager Chris Finnamore recommends the best products for your requirements.



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CONTACTS

Please contact the relevant department at the email address listed above. You can also write to us at:

**Help
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Please try to give full details of your problem. We need an email address or daytime and evening telephone numbers in case we need more information.

Although the policy of *Computer Shopper* is not to publish readers' email addresses, we include them in Help so that other readers with experience of similar problems can share their solution (please also cc any comments to the relevant Help department above). If you would prefer not to have your email address published, please say so.

Replacing a laptop keyboard

Q I have an MSI M510C notebook PC, and its keyboard has suddenly lost the ability to type all the letters on the QWERTY line, except the letters T, Y and P. This keyboard was replaced a year ago by a 'professional' laptop repair company, and I was never really happy with the work done. I am not an 'unhandy' person and would like to find out where I can source a replacement keyboard and how to remove the existing one. It's obvious with some notebooks, but not in this case.

Katerina Michaels, k@terina.eclipse.co.uk

A Your first, and perhaps hardest, step is to track down a source for a replacement keyboard. Unlike desktop computers, where most parts are standardised and interchangeable, notebook parts are generally specific to the particular model. In practice you may find that a few other notebooks use the same keyboard, but there is no easy way of knowing which.

At least in your case you know the manufacturer's name. Many Taiwanese-built computers are rebadged with retailer-specific brand names, so the manufacturer's name is hard to find out, and even if you know the manufacturer's name, the company won't want to help you with spare parts.

The MSI M510C is also known as the MS-1003, so you may need to use both model numbers when searching for parts. In your case the keyboard is a Zippy KW-300-UK, MSI part number S11-0000030-Z05, but that won't help you much as Zippy Technology of Taiwan sells only in wholesale quantities.

Sometimes parts can be found on eBay, but while writing this we could find only keyboards for the more popular MSI L6101.

Fortunately for you, your notebook was built by MSI and this company should have parts available. Contact MSI Computer (UK) Ltd. Its address is Unit 3, Swallowfield Centre, Swallowfield Way, Hayes, Middlesex, UB3 1AW. The telephone number is 020 8813 6688 and the website is <http://msicomputer.co.uk>.

REPLACING A KEYBOARD

It is easier to work out how to replace a keyboard when you have the replacement in front of you. Some notebook keyboards have legs on the underside and are held in by screws through the base. If your replacement keyboard has such legs, turn the notebook over and figure out which screws match the positions of the keyboard legs. Bear in mind that some screws may be sitting inside the memory slot or under other covers. Some manufacturers mark the correct screws with the letter K.

Other keyboards are held in place by tabs on the bottom edge and two screws on the top edge. These screws will be under the panel, just above the keyboard (where the on/off button is usually located). On most computers this panel is held in place with plastic clips, but on some the plastic covers the hinges as well, and there are screws at the back of the hinge covers. Several Sony notebooks have a single screw at one end of this cover, on the side. After removing this screw, you can release the cover by sliding it a few millimetres in that direction.

In most cases, the cover simply clips down. As you try to prise this off you may wonder if you are going to break something, as you have to pull hard to release the clips. A thin flat plastic tool such as a guitar pick is useful here. Always examine the cover carefully to see if there are any clues as to how it comes off. If in doubt, leave it to an experienced technician. Often you can search the web for instructions. Some manufacturers such as Dell and IBM have instructions on their websites.

Take care as you lift the keyboard off. The keyboard will be attached by a delicate ribbon cable that fits into a plastic socket on the motherboard. The socket will have two parts: one part can be pried upward a little to release the ribbon. Be careful not to break this socket or you will have real problems.

Windows Installer won't install

Q I'm in a real fix. A friend's hard disk failed a few weeks ago and I fitted a new one for him, installing Windows XP with SP2 on it afterwards. The problem arose when I went to the Windows update site. It seems that the PC started to download and install Windows Installer 3 but somehow the installation failed. My guess is that he switched the PC off during the installation, but he won't admit it.

The problem now is that the PC thinks Installer 3 is installed but the update site insists that it is not and continually tries to download and install it, resulting in a failed installation each time.

I've tried several methods of getting rid of the badly installed installer, but to no avail. It does not show up in Add/Remove programs, and I've been to the Microsoft site and gone through the list of actions it suggests, such as deleting the temporary user/system

folders. This works initially, and a full list of updates is then available. However, these do not all install successfully and, when the PC reboots, I'm back to square one.

Is there another way to get rid of this manually? I'm not keen on messing about with someone else's Registry, so I have left it alone.

Tam McDonald, python1503@yahoo.co.uk

A Don't be too quick to blame your friend for this error. We have seen lots of cases recently in which a Windows Installer 3.1 Update has failed.

The problem may simply be that the installer has installed properly but that Windows Update doesn't realise it. Windows Update log files can get corrupted and cause this kind of error. We suspect, though, that there is something wrong with Windows Installer.

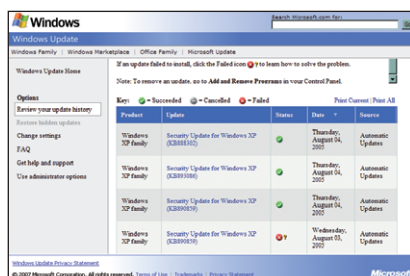
The first thing to try, which usually works for us, is to bypass Windows Update and download the latest Windows Installer program directly from Microsoft's download site at www.microsoft.com/downloads. It is listed as Windows Installer 3.1 Redistributable. This version includes a standalone installer. After all, if the Windows installer is corrupted, how can you install an update that uses Windows Installer to install? This usually cures the problem.

If this fails, you might want to test the hard drive. Running chkdsk with the surface scan option can do this, but it's usually better to run a low-level diagnostic utility. If one isn't supplied by your hard disk manufacturer, try the free and excellent MHDD from www.hddguru.com. Bear

in mind that apparent drive errors can be caused by bad ribbon cables or IDE ports and that even new hard disks can have errors. Memory errors can also cause installation issues, so run a memory tester while you are at it.

After that, it's time to start investigating the error logs created by Windows Update. First, run Windows Update. Click Start, All Programs and you should find it listed at the top left. A browser window opens. On the left under Options, you should see Review Your Update History. Click this, and you should see a long list of updates. Those that failed have a red X beside them. If you click on this X a new window will open that gives an error code such as Error Code: 0x80080008. There is a comprehensive list of these error codes at <http://tinyurl.com/y6udl9>, but this usually just gives a name that's as meaningless as the code. The above code, for example, means CO_E_SERVER_STOPPING. We suggest that you search online with the error code and name of the update that failed.

Microsoft also offers free online support for Windows Update problems. Most errors will disappear if you retry Windows Update after a few hours, however. If you are still stuck, there are more detailed troubleshooting steps described in the Microsoft KB article at <http://support.microsoft.com/kb/906602>. The methods are too lengthy to go into here, but basically you follow instructions to find the error in the log file, then look up that error code. The Windows Update site has some pretty good web-based help files. Just click on the link after an update fails and it will usually suggest what to do.



▲ Rather than relying on Windows Update, you can download and install updates yourself

Recording DVDs from a Sky+ box

Q I want to connect my Sky+ box to my PC so that I can make copies (for personal use only) of my favourite programmes. How can I do this? On a Sky+ box there are two USB ports: one at the front and one at the back. Sky's technical support informs me that they are inactive but that I can connect the Sky+ box to a DVD recorder using a SCART-to-SCART cable and make copies that way. But then I'd have to buy a DVD recorder. Is there a way to connect the SCART socket on the Sky+ box to a USB port (or any other port, for that matter) on my PC?

Abdul Sameja, abdul.sameja@hotmail.com

A As you have found out, although the Sky+ box includes a complete personal video recorder, its hard disk soon fills up and, if you want to keep more than a few programmes, you need to export them to some form of external recorder.

The Sky+ box's only output to connect to your computer is a SCART connector. You could use the coaxial TV antenna, but the quality wouldn't be very good. As SCART is an analogue interface rather than a digital one, you will need a TV tuner or capture device to convert the signal to a digital form that your computer can handle. Most adaptors are PCI cards but some are available as external boxes that connect through a USB port. These are particularly handy for use with notebook computers.

Next you need some way of capturing that video stream and saving it to your hard disk so that you can use it to master a DVD. Many of these adaptors come with some kind of video-capture software that enables you to record the signal to your hard disk. Then you can copy it to a DVD using the software that came with your DVD-RW drive. However, if you have software that allows you to use your PC as a Personal Video Recorder (PVR), this will make the process much easier.

This software sometimes comes bundled with a TV card, or you can buy it as an upgrade for just a little more. It might be best to choose the software first and then find a bundle that includes a compatible TV card. Helpfile has had good results with a program called Beyond TV, which you can obtain from JMS Electronics (www.jms-electronics.co.uk). On page 114 you'll find a Labs test of TV tuner cards in which we go into some depth on the capability of the bundled software.

Once you have the right equipment, make sure you select the correct output on the Sky+ box remote. You need to use the bottom SCART connector (marked TV SCART), as the other one (VCR SCART) does not include separate RGB signals. You will also need to make sure you have plenty of hard disk space; 20 hours of TV, even with good compression, occupies about 10GB.

If you want more information, you will find useful articles at www.dvdhelp.com/skyplus1.asp and <http://tinyurl.com/3y48y5>.

Using Slax to avoid spyware

Q I was concerned to read how ineffective many anti-spyware packages are in the August issue of *Computer Shopper*.

I have recently set up a spare PC to boot from a Slax Linux Live CD, with no writable media such as a hard disk connected at any time, to use when performing all my home banking and credit card internet transactions.

By typing in the address of the relevant organisation directly, I assume I am unlikely to fall victim to spyware, including keyloggers, that could compromise my security details. However, as the Live CD does not contain any anti-virus or anti-spyware software, is there a risk of real-time

infection by spyware that could compromise my security while the PC is in use?

I realise any malware will vanish once the PC is switched off, as it has no writable media.

Mark Ablett, ablett@fastmail.fm

A There is a theoretical danger, but as yet we have seen almost no widespread spyware threats that will run under Linux. It's simply not worth the criminals' time to write spyware for such a small market. Windows users present a much larger target, many of whom are less well informed about the dangers of spyware.

But yes, there are a few dangers. In particular, there is at least one password-stealing Trojan

that infects Firefox under Linux. Fortunately, it infects only an earlier version of Firefox 1.5, and later versions patched the security flaw that allowed the spyware to install itself. In any case, we doubt it could install on a CD-based system.

Second, most spyware must be downloaded (we assume you have some sort of RAM drive for temporary files) before a setup program runs in order to install it to the operating system drive. The read-only system drive is extremely likely to present great difficulties here. Unfortunately, by default Slax seems to log you in as root (with the password 'toor') and it would add a tad more security if another user account was specified. Even so, we think it would be very hard for spyware to install itself on a Linux PC unnoticed.

Is it safe to download anti-virus software?

Q I am about to buy a new notebook PC, and I also want to buy and install Steganos AntiVirus 2007, as recommended by your magazine (*Labs, Shopper* August 2007). However, it appears from the Steganos website that the only way of buying AntiVirus 2007 is to download it. How can I do this with the new notebook, which won't have anti-virus software already installed? Surely I would risk an infection?

Jeremy Peters, jeremypeters@lineone.net

A This is a good question. You may remember a few years ago that new computers straight out of the box were becoming infected with network worms (a kind of virus that spreads by itself) such as Code Red and Sasser, which spread over the internet and could find their way into a computer without the user downloading anything. Fortunately, since then

Windows XP was updated with a new firewall that blocks such worms, as well as coming with myriad security patches. Windows Vista also includes a firewall.

For a computer to be infected, you either have to click a link to download an infected file from a website or else open an email that contains a virus and perhaps click on the attachment. If you connect to the internet and visit only Steganos's website, you should be OK.

Your new notebook might be even safer than that, however, because many new computers come with a three-month trial version of some anti-virus software. The software manufacturers pay computer companies to load up their new models with all this stuff on the basis that a user will be much more likely to buy the program he has already got rather than remove it and install another one.

Almost all new computers now come with Windows Vista, which has a host of new security

measures. Microsoft vice-president Jim Allchin once told reporters that Vista's new security features are so capable that he was comfortably letting his own seven-year-old son use Vista without any anti-virus software installed. Most anti-virus companies would regard that as somewhat foolhardy, particularly as every hacker in the world has been busy trying to find the inevitable security flaws that come with any new operating system. Still, Vista's default installation turns off administrator rights, so you have to enter an administrator password to install any software, and this makes it harder for a virus to infect the system.

You should be perfectly safe connecting to the internet without any anti-virus software installed, provided that you don't access your email, run peer-to-peer networking programs or download software from unknown sites. We still recommend that you install Steganos, or another anti-virus program, as soon as you can, though. ➔

Shutting down takes half an hour

Q My Windows XP Home PC takes up to 30 minutes to shut down, and I can't work out why. Suspecting that my AVG anti-virus software had let a virus through, I followed the recommendation in your magazine (*Labs, Shopper* August 2007) and installed Steganos 2007 AntiVirus.

On restarting the PC, Steganos started a scan. Fifteen minutes into this, the taskbar and icons vanished. I couldn't open Task Manager and had to power down. At the next restart, I had the same result.

I restarted and aborted the scan. This time Windows took about 30 minutes to repeat the cycle without the scan. I restarted again, stopped the scan before it started and tried System Restore, but this wouldn't work

Peter Shea, pshea@talktalk.net

A Given that you have trouble running a virus scan, as well as delays in the shutdown process, we wonder if there is an underlying hardware fault. Alternatively, both could be symptoms of a rootkit infection, or it could simply be that Windows is corrupted. Perhaps a device driver or other software is causing conflicts.

ROOTING OUT THE ROOTKITS

Start by checking for a rootkit infection. While you're at it, download a free trial version of AVG Anti-Spyware from <http://free.grisoft.com> and see if its scans are affected by the same problems you found with Steganos. Rootkits don't usually work in Safe Mode (and scanning in Safe Mode makes it easier to remove any spyware) so, after installing AVG Anti-Spyware and updating it, restart the computer in Safe Mode. Do this either by pressing F8 repeatedly during the reboot (it needs to be pressed in the short interval after the initial BIOS checks and before the first Windows splash screen) or else by running msconfig and selecting Diagnostic Startup. Then run a scan.

While we don't know of any rootkits that run in Safe Mode, you might also want to try running a rootkit detector. The best-known one is RootkitRevealer from www.sysinternals.com, which is now part of Microsoft. F-Secure also has a free beta version of its Blacklight scanner at <https://europe.f-secure.com/exclude/blacklight> and AVG has recently added a free rootkit program to <http://free.grisoft.com>. These all work in normal mode by comparing the files, processes and Registry entries that Windows reports against the results shown by the tool's own code, which bypasses Windows and accesses the hardware at a lower-level. Any differences could be the result of a rootkit.

You must be careful when interpreting the results, though, as not all the discrepancies these tools find are the result of rootkits. For example, in our test Sysinternals reported two Registry entries containing null characters (which makes them invisible in RegEdit), but these appear to be normal entries created by Windows Service Pack 2 (SP2). AVG reported that a standard Windows file was a hidden application, even though it appeared in Windows Explorer.

HARDWARE ISSUES

Having ruled out the possibility of a rootkit or other spyware, we'd concentrate on possible hardware issues. The problem could be due to faulty memory or a motherboard issue, but is more likely to be a hard disk problem. Perhaps the file system is corrupt, there may be bad sectors or you may have a failing hard disk that locks up intermittently.

If your PC manufacturer provided diagnostic software, we'd start with that. On most Dell computers, for example, pressing F12 during startup will offer a menu that includes diagnostics. The detailed diagnostics are then either run from a hidden partition on the hard disk or from a CD that was provided with the system. If you have lost the CD, you can download diagnostics from the Dell website. We like Dell's diagnostics tool because it has a 'problem specific' option. If you choose System Locks Up, it will run a selection of motherboard tests, many memory tests and finally a comprehensive hard disk test.

If your PC didn't come with diagnostics, try Memtest86+ from www.memtest.org or download the Ultimate Boot CD from www.ultimatebootcd.com. This is a great collection of free diagnostic tools that you can download as an ISO image and burn to create a bootable CD.

Run the Windows chkdsk program with the surface scan option enabled to check for file system errors and bad sectors. Also run a low-level hard disk diagnostic, as intermittent hard disk lock-ups are more likely to be detected by MHDD (included on the Ultimate Boot CD or from the software section of www.hddguru.com).

MHDD is not terribly user-friendly. Once you have selected the correct drive port, press F8 for SMART diagnostic values. The standardised scores should all be about 100 or, in a few cases, 200. Then press F4 for a surface scan, which charts the time taken to access each block. Finally type the command CX to try a random seek test, which may reveal lock-up problems. It is always a good idea to make sure you have a good backup before testing a hard disk that you suspect of failing.

These tests will at least tell you why the anti-virus software is locking up, although they may

not answer the slow shutdown issue. Slow shutdown is usually caused by a process not responding properly, or by problems when Windows tries to write settings to the Registry.

DRIVING ME UP THE WALL

The most common fault is a buggy device driver, although a couple of Windows bugs can cause issues on certain systems. Microsoft has issued updates for some of these. Start by running Windows Update and choose the Custom option, which includes many patches not on the 'critical' list, as well as many device driver updates. Select all those that are relevant.

A common cause of an extremely slow shutdown is the Nvidia Driver Helper Service. Click Start, Run and type msconfig. Click the Services tab and disable the Nvidia service if it is present. It's easier to find if you hide Microsoft services. You can also use msconfig to disable different groups of startup items and services to see if this makes a difference.

Windows XP Professional Edition has a security option to wipe the Windows Paging File on shutdown. This is hardly ever worthwhile and can take a long time on some systems. It is disabled by default, but if you use XP Professional and you think you might have enabled it, run GPEDIT.MSC and navigate to Computer Configuration, Windows Settings, Security Settings, Local Policies, Security Options. Find 'Shutdown: Clear virtual memory pagefile' in the right pane. Note that Windows XP Home Edition doesn't usually include Gpedit.

Speaking of Windows XP Professional, there are several issues that relate to corporate domains and slow shutdowns. These occur on notebooks when used out of the office. The file sync option can also be very slow, for example. Even if you don't run Windows XP Professional, are you sure you haven't installed any software to make a backup at shutdown? These can be very slow, particularly if they back up to an internet site or hang when looking for an external hard disk that isn't available.

If updating device drivers doesn't help and you can't get rid of the problem by disabling a startup process or service, check the Event log. Check the computer clock before shutdown (as the clock may differ from your watch) and note the time it takes. Then, on restart, click Start, Run type Eventvwr.msc and click OK. Look for entries during that time period. Look first for Errors and Warnings, as these may indicate the cause of delays. Also look at the time stamp on information log entries, as these can reveal what is taking so long to complete.

Bear in mind that during a normal shutdown there are lots of entries, including warnings and even errors. For example, some process may try to access the internet after the TCP/IP service has shut down. Don't be too concerned by every error you see; you are looking only for those that might cause a substantial delay. Finally, with so many events recorded in the log file during shutdown, corruption of log files can itself cause the delay. Try clearing log files in Event Viewer and then shutting down.

For a lengthy discussion of Windows XP Shutdown issues see Jim Eshelman's list of known issues at <http://tinyurl.com/haeb5>.



◀ MHDD is a low-level hard disk diagnostic tool that can detect lock-ups and other problems

How do I reset my network settings?

Q My work takes me abroad every few months. Each time I go, the IT staff at my destination reconfigure my network settings so I can access the internet in their office. When I return home, I find that I can't connect to any other network. How can I restore my settings?

Anna Carrol, via email

A Before you go on another trip, click on Start, Run and then either type or copy and paste the following command:

```
netsh -c interface dump > C:\tcpip.txt
```

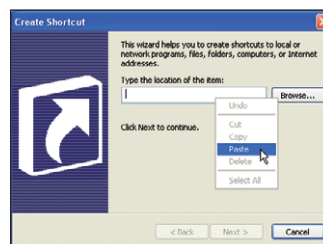
This will save your network configuration to a text file tcpip.txt. Now, if someone has changed any of your settings, you can restore them using this file. When you get back home, type in the following command:

```
netsh -f c:\tcpip.txt
```

It is easier to create a shortcut on your desktop containing this command. To create the shortcut, copy the above command, then right-click on an empty area of the desktop and choose New, Shortcut. A window will open

inviting you to type the location of the item. Paste the above command into it and click Next. Then type a name for the short cut, such as 'Restore TCP-IP Settings' (you can't use TCP/IP in the name) and click Finish.

Finally, you can change the icon from the rather boring generic one Windows uses by right-clicking on the icon, choosing Properties and clicking the Change Icon button. After a warning that netsh.exe contains no icons you will be shown a selection of standard icons from which to choose.



▲ Paste the command into the shortcut location box

Hazards of an unprotected PC

Q My Fujitsu notebook is two years old and, until recently, had never been connected to the internet. When I plugged in my USB Motorola modem, it installed correctly and allowed me to connect the PC to the internet for a few minutes. Windows Security Center then said that the virus checker was out of date. The anti-virus software I have is Norman Cat's Claw, preinstalled by Fujitsu, which turns out to be a free demo version.

I tried to remove this software using Add/Remove Programs, hoping to replace it with Norton AntiVirus 2002, which I own. Unfortunately, it wouldn't let me. Then it said Windows needed to install 120 updates, which is understandable as the PC hasn't been on the internet since it was new. I clicked OK to start the installation, but it froze and powered down.

When I rebooted the PC, the applications loaded correctly and the Norton and Norman dialog boxes opened. While the Norman dialog box closed, the Norton one remained open and the welcome screen appeared. The computer then froze again and the open dialog box stopped responding.

Windows did not react to Ctrl-Alt-Del, and I couldn't shut down from the Start Menu. It now freezes after the Start Menu has opened, and the hour glass shows continuously after a while. Fujitsu said the problem was either a software conflict, a virus or spyware. It recommended that I try to delete one of the anti-virus packages, but Windows won't let me get that far before it crashes.

Daniel Russell, via email

A There is so much nasty stuff out on the internet these days that we hate to connect any unprotected PC except behind a firewall, such as that provided by a home router or a corporate network. Until it has up-to-date virus and spyware protection and all Windows security updates installed, a PC is very vulnerable on the internet.

Unfortunately, this advice may be too late for you. You may want to buy a router anyway, because if this is your second PC then both

could share your broadband connection. It would also make the advice below easier to follow.

It is also worth noting that running two different anti-virus programs together is a common cause of conflicts and at the very least will make your computer very slow. You are also using a very old version of Norton AntiVirus.

GET SAFE

To get your PC running again, you need to restart in Safe Mode. Do this by pressing the F8 key repeatedly during the startup process. You have to hit it between the initial BIOS splash screen and before the Windows logo appears so, as soon as you see that BIOS screen appear, start pressing F8 repeatedly. Hopefully, you will then see a menu of choices, including the options Safe Mode and Safe Mode with Networking. Either of those should work.

Safe Mode with Networking will enable you to access the internet in order to download anti-virus and anti-spyware software. Unfortunately, it won't support a USB modem or most wireless device drivers, so you will have to connect by Ethernet cable. If you have a home router, this is easy. Connecting through the firewall in even a cheap router should be much safer than connecting directly to your modem anyway.

When you restart in Safe Mode, you should be offered the choice of using System Restore to restore your system to an earlier state. If so, take the opportunity to go back to the state before these recent changes and start again, free from infection. However, this may not work as System Restore may have been turned off, or its restore points could be corrupted.

The next thing to do is to disable some programs that start automatically when your PC boots. Click on Start, Run and type in the command msconfig, then click OK. This is a system tool that allows you to disable startup items and services. We suspect that at least part of your problem may be caused by a conflict between Norman and Norton, so we recommend that you disable all startup items and then click on the Services tab. Select the box that shows only non-Microsoft services, then disable them all. Hopefully, doing that will enable you to restart your PC in normal mode.

Norton 2002 is now too old to be of much use, even when updated with the latest virus signatures. We haven't reviewed any Norman anti-virus products, but we suggest that you remove both programs as far as you can; they can be a pain to remove. The program you seem to have is called Norman Virus Control (NVC). Cat's Claw is a component of that program. Download the NVC Uninstall program from <http://download.norman.no/public/Delnvc5.exe> and follow the instructions to remove NVC.

Instead of using Norman or Norton anti-virus software, we suggest that you install the free version of AVG Antivirus, plus AVG Anti-Spyware, which is a trial version, from <http://free.grisoft.com>. You can also download updated signature files there, although if you access the internet through a LAN, it is easier to let the programs update themselves. If you don't have access to a router, you may want to download them on another PC and burn them to a CD.

SILVER SERVICE PACK

The other important update is Windows XP Service Pack 2 (SP2). It looks as if your PC is new enough to have this installed, but if not you should try to obtain a copy on CD and load this before going online again. If you have another computer available, you could download this from <http://download.microsoft.com>, but if you try this method be sure to get the System Administrator or Corporate version of SP2, which contains the complete set of files. The consumer version is just a setup program, which then needs an internet connection to download the rest.

If you use another computer to download the complete SP2, you can then burn it to a CD and use that to install SP2 on your notebook. You may even be able to do this at your workplace. Microsoft will also post you a CD for about £20.

Once you have SP2 installed, as well as the basic anti-virus and anti-spyware programs, it should be safe to venture online for long enough to update your anti-virus and anti-spyware programs. After that, you can get the rest of the Windows Updates. There are so many updates since SP2 came out that Microsoft really should have rolled them up into an SP3, but it looks as if we will have to wait a while for that. ☞